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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,724	08/10/2001	Keith Louis Haughton	13744	4814

293 7590 04/23/2003

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ARLINGTON, VA 22202

EXAMINER

CHOI, STEPHEN

ART UNIT	PAPER NUMBER
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3724

DATE MAILED: 04/23/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/925,724

Applicant(s)

HAUGHTON ET AL.

Examiner

Stephen Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the c rrespondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2003 .
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 14-16, 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 . 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species F in Paper No. 6 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-13 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Henning et al. (US 4,867,026).

Henning discloses all the recited elements of the invention including:

- a) a generally circular blade portion (1);
- b) a plurality of spaced apart teeth (2) wherein each tooth having a leading edge and a dimple (at 4) formed proximate to the leading edge and having a positive rake provided by a top cutting angle formed by the dimple (γ , Figure 2);
- c) a tooth leading plane is inclined forwardly and the positive rake is further provided by the forward inclination of the tooth (Figure 1);
- d) the positive rake in a range between about 20 and about 45 degrees (col. 3, lines 46-48). With respect to claims 5 and 11, it is noted that the term "about" is covered by a range between about 20 and about 45

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degrees as set forth in claim 4. Therefore, about 30 degrees taught by Henning meets the limitation "about 40 degrees";

e) a relief angle (α) being between about 5 and about 15 degrees (col. 4, lines 38-40). With respect to claim 7, Henning discloses a range between about 5 to 12 degrees;

f) a lateral clearance angle (β) being between about 1.5 and about 5 degrees (col. 3, lines 55-56). With respect to claim 9, Henning discloses a range between about 0.5 and 2.5 degrees.


Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Standal, Henderson, Ludwig, Denis, Suzuki et al., Morey et al., MacLennan, JP 57201121, and JP 62277216 are cited to show related devices.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Choi whose telephone number is 703-306-4523. The examiner can normally be reached on Monday thru Friday between 9am and 5pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Allan Shoap can be reached on 703-308-1082.

In lieu of mailing, it is encouraged that all formal responses be faxed to 703-872-9302. Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is 703-308-1148.

sc
April 16, 2003


Stephen Choi
Patent Examiner